EZ TANKLESS

EZ 202

OPERATION & INSTALLATION MANUAL

EZ 202 TANKLESS WATER HEATER SPECIFICATIONS	
Maximum Gas Consumption BTU/h	85,000
Hot Water Supply at 45f Temperature Rise	3.2GPM
Gas Supply Pressure (LPG/NG)	11” WC/ 8” WC
Exhaust System	Natural Draft / Flue
Ignition System	Water Controlled Electric Ignition
Electric Supply	2 X “D” Cell Battery
Safety Devices	Flame Out Over Temperature, 20 Minute Timer
Suitable Inlet Water Pressure	8-100 PSI
Water Connection	G 1/2" to 1/2" NPT w/ included fittings
Gas Connection	G 1/2" to 1/2" NPT w/ included fittings

Thank you for purchasing our instant gas water heater. Read this manual before installing and operating, and keep it for future reference.

READ THE SAFETY INFORMATION

All safety messages will follow the safety alert symbol and the words: "**DANGER**","**WARNING**", "**CAUTION**" or "**NOTICE**".

These words mean:

DANGER - An imminently hazardous situation that will result in death or serious injury.

WARNING - A potentially hazardous situation that could result in death or serious injury and/or damage to property.

CAUTION - A potentially hazardous situation that may result in minor or moderate injury.

NOTICE: Attention is called to observe a specified procedure or maintain a specific condition.

DANGER

***Do not install the EZ 101 or EZ 202 in a bedroom, basement, bathroom, or any room with poor ventilation.**
***The flame window of the water heater should be installed at eye level.**
***No wires of electrical equipment should be above the water heater. The heater should be kept at least 15 inches away.**
***Do not install the water heater where high winds may blow, causing flame-out or incomplete combustion.**

DANGER

CARBON MONOXIDE HAZARD

This appliance can produce carbon monoxide which has no odor.

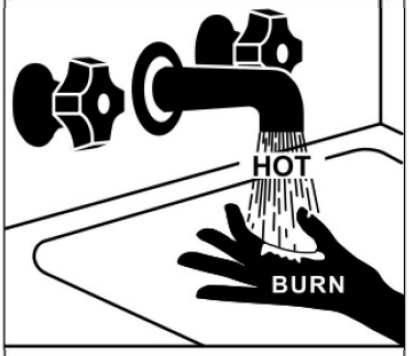
Using it in an enclosed space can kill you.

Never use this appliance in an enclosed space such as a camper, tent, car or home.

⚠ WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

⚠ DANGER



Water temperature over 125°F (52°C) can cause severe burns instantly or death from scalds.

Children, disabled and elderly are at highest risk of being scalded.

See instruction manual before setting temperature at water heater.

Feel water before bathing or showering.

⚠ DANGER

If you smell gas:

1. **Shut off gas to the appliance.**
2. **Extinguish any open flame.**
3. **If odor continues, keep away from the appliance and immediately call your fire department.**

Failure to follow these instructions could result in fire or explosion which could cause property damage, personal injury or death.

⚠ DANGER

⚠ Vapors from flammable liquids will explode and catch fire causing death or severe burns.

Do not use or store flammable products such as gasoline, solvents or adhesives in the same room or area near the water heater.

Keep flammable products:
1. far away from heater,
2. in approved containers,
3. tightly closed and
4. out of children's reach.

Water heater has a main burner flame.
The main burner flame:
1. can come on at any time and
2. will igntie flammable vapors.

Vapors:
1. cannot be seen,
2. are heavier than air ,
3. go a long way on the floor and
4. can be carried from other rooms to the main burner flame by air currents.

⚠ WARNINGS

- Do not leave unattended.
- The exhaust gas and top of the portable gas water heater is HOT! Do not place hands or any foreign object near the top of the heater.
- Turn off power, gas valve and water valve after use.
- For LPG Model if stored indoors, detach and leave propane cylinder outdoors.
- If the smell of gas is detected, turn off the gas valve at the tank immediately! Do not use flame for leak detection.
- Use only outdoors, unless used in a large open air barn/garage, within local codes.
- Do not drink the water from the heater.

- Do not connect to a remote gas supply
- Do not over tighten the gas connections to the portable gas water heater with a wrench. This may cause a crack in the gas inlet.
- This appliance must be protected from rain.
- LPG Gas should be supplied from a minimum 20 pound propane cylinder (not included) such as used with outdoor grills. A propane regulator set at 11" WC outlet pressure must be used.
- LP-gas cylinders must either be designed, fabricated, tested and marked (or stamped) in accordance with the regulations of the U.S. Department of Transportation (DOT) or for use in

- The gas cylinder must be disconnected when the water heater is in storage.

- Check whether the flame is extinguished after each shower and do not forget to turn off the gas valve.
- Always check all the gas pipe connections with soapsuds to see whether there is any gas leakage. In case of gas leakage, please shut off the gas supply. Under such condition, actions such as ignition, switching on/off the electric power supply are strictly prohibited to avoid explosion and fire.
- Never mix gas types. Use only 1 gas type at all times.
- Check the gas hose regularly in case of aging or crack after long period of usage. Replace regulator hose if cracks are found.
- For users, if the flame of the heater is not stable, it may be caused by the breakdown of the propane regulator connected to the gas tank. In that case, stop using the heater immediately and contact a service technician.
- Make sure that the flame of the heater has extinguished after each shower.
- Turn off the main gas valve and the water inlet valve in case of water shortage.

⚠ WARNINGS

* FOR LPG MODELS

- ✧ The gas must be turned off at the LP-gas supply cylinder when the water heater is not in use.
- ✧ If your EZ Tankless water heater is attached to a portable propane cylinder and hose, the water heater and propane cylinder should be stored outdoors in a well ventilated space and out of the reach of children.
- ✧ Storage of the water heater indoors is permissible only if the cylinder is disconnected and removed from the water heater.
- ✧ Cylinders must be stored outdoors, in a well-ventilated space, out of the reach of children, and must not be stored in a building, garage or any other enclosed area.
- ✧ Should overheating occur or the gas supply fail to shut off, turn off the manual gas control valve to the appliance.
- ✧ Make sure that the gas cylinder stands vertically and will not be knocked over when in use.

⚠ ADDITIONAL WARNINGS

■ **Prevent Eyes from Getting Hurt**

Keep eyes away from the flame indicator window at a minimum safety distance of 300mm during ignition. If the first attempt of ignition fails, wait 10-20 seconds before the next attempt.

■ **Prevent No-Water Burning in The Heater**

After each shower, make sure that the flame is extinguished when the valve is closed. If the flame still exists after the water valve is closed, something must be wrong with the heater. Switch off the gas valve immediately and contact the service center. Otherwise the heater may be damaged by overheating and then may cause a fire hazard.

■ **Do Not Use The Heater Water for Drinking**

As there is always residue in the heater, the water supplied by the heater is only for general usage, not for drinking.

■ **Dealing With The Abnormal Conditions**

- ● Stop the heater when there is strong adverse wind blowing. Strong winds can cause igniton failure or sudden flame out.
- ● In case of abnormal burning (e.g. flame-back, flameout, yellow flame or black smoke, etc.), unusual smell, noise or other abnormal situations, keep calm and turn off the gas valve and contact the service center or the gas dealer.

⚠NOTICE

■ **Reduce The Chance of Getting Burned**
After shower, please turn off the gas valve and run the water until cool water is flowing through the heater. Then turn off the water inlet valve.

■ **Freezing Prevention**
Under the circumstance of low temperature, please drain the water remaining in the heater completely after each use. Otherwise the water may freeze and cause damage the heater.

■ **The following phenomenon are normal:**

- When the water pressure is lower than 3psi, the heater cannot be ignited.
- The drain valve/pressure relief is dripping. When the water pressure is too high, the drain valve will release water so as to reduce the pressure to protect the heater.
- When the heater is supplying hot water to too many points at the same time, the hot water flow will be reduced, and under exceptional circumstances no hot water will come out at all.

■ The gas water heater is for point of use, for temporary water heating and not for connection to a permanent inlet water connection or for connection to a water distribution system to supply multiple outlets.

Features

1. Automatic Operation
- Turn on the hot water tap, and then hot water will come out. When the tap is turned off, the flame will automatically go out.
- Independent control of water and gas makes it easy to adjust the water temperature.

2. Innovative Design
- Ultra-thin appearance, beautiful design and convenient to install.
- Advanced energy-saving combustion technology greatly improves burning efficiency.
- The heater is able to ignite at low water pressure (3psi), which fulfills the needs of more users.

3. Complete Safety Functions
- Sensitive IC flame sensor will cut off the gas supply if flame goes out unexpectedly.
- Insufficient water flow pressure protection.
- The gas valve will automatically turn off when dry burning happens.

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Note: Please ensure that the contents of this manual have been fully understood prior to installation or operation of this gas tankless water heater.

1.0 LIMITED WARRANTY

WHAT IS COVERED?

The EZ Tankless warranty covers any defects in materials or product workmanship when the product is installed and operated in accordance with written installation instructions contained herein, subject to the terms outlined within this limited warranty document. This warranty is applicable only to products that are installed by a state qualified or licensed contractor, or installations approved by EZ Tankless through the return of included warranty card and documentation demonstrating proof of installation.

HOW LONG DOES COVERAGE LAST?

ITEM	PERIOD OF COVERAGE
Heat Exchanger	1 Year*
All other parts and components	1 Year*
Reasonable Labor	1 Year*†

*Warranty period begins from date of purchase unless proper proof of installation is provided, in which case warranty period begins from date of installation.

†Warranty only covers labor deemed necessary and performed by EZ Tankless tech support staff at our repair center in Fowler, IN.

WHAT WILL EZ TANKLESS PROVIDE?

EZ Tankless will repair or replace the product or any part or component that is considered defective in materials or workmanship, except as set forth below: EZ Tankless will provide parts with free shipping for most repairs. EZ Tankless will perform labor and pay shipping costs to repair the product if deemed necessary by EZ Tankless. All repairs must be performed using genuine EZ Tankless parts.

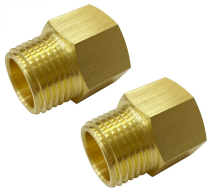
If EZ Tankless determines that repair of a product is not possible, EZ Tankless will replace with a comparable product, at EZ Tankless' discretion. If a component or product returned to EZ Tankless is found to be free of defects in material or workmanship, or damaged by improper installation or during return shipping, the warranty claim for product, parts and labor may be denied.

2.0 WHAT'S INCLUDED?

1 x EZ Tankless Water Heater

1 x Showerhead

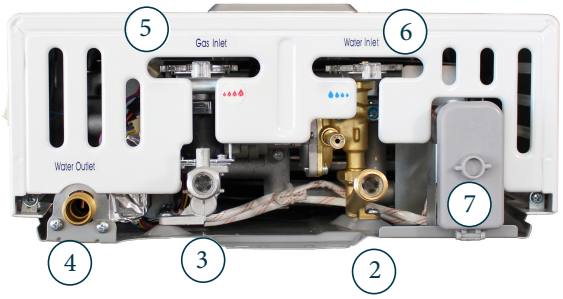
2x 1/2" G to NPT



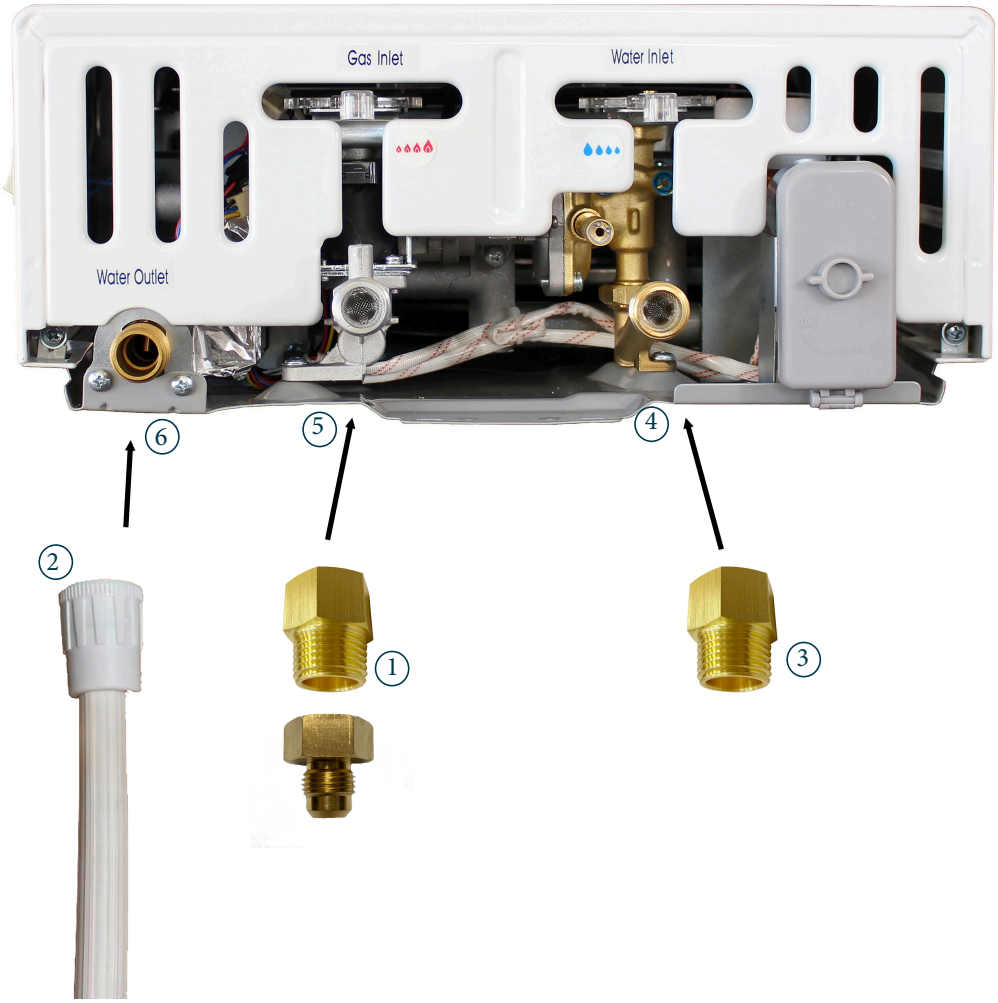
2.1 FEATURES AND BENEFITS

- Fully-automatic operation. Once installed, simply turn on the water spigot or shower–instanteous hot water will arrive in a few moments. After the tap is turned off, the tankless heater will extinguish and cease operation.
- Complimentary shower head and hose included with unit.
- Simple and aesthetically pleasing design features – the unobtrusive unit design fits seamlessly in a variety of locations.
- Advanced electronic control system controlled by water flow provides extremely reliable operation. (Ignition electrical source is supplied by 2 x "D" cell battery)
- Integrated ion flame sensor cuts the gas supply if the pilot flame is unexpectedly extinguished.
- Insufficient water pressure protection.
- 20-Minute safety timer reduces the risk of carbon- monoxide poisoning in the event of inadequate ventilation.
- Independent control of water flow, burners, and gas flow allow for more flexible range in water temperature.
- If water supply is interrupted, the gas valve will automatically turn off.
- High thermal efficiency and superb combustion performance.
- Low water pressure ignition. The heater can function at as low as 8PSI water pressure, making this unit suitable for use at high altitude or applications using well water with older or less powerful pumping systems. For example; as tested in our USA laboratory, this unit has been proven to easily operate via a garden hose inlet water supply.

① Burner Selector
② Water Inlet
③ Gas Inlet
④ Hot Water Outlet
⑤ Gas Flow Lever
⑥ Water Flow Lever
⑦ Battery Box



EZ 202 Fittings and Connections



1. 1/2" NPT Gas Fittings
2. Showerhead Hose
3. 1/2" NPT Fitting
4. Water Inlet
5. Gas Inlet
6. Water Outlet

⚠NOTICE

The 2x supplied 1/2" NPT Fittings MUST be used with the GAS and WATER INLETS for all installation types. Should a 3rd NPT Fitting be desired for the water outlet, please contact EZ Tankless for purchase information.

3.0 SAFETY PRECAUTIONS

01. Always check water temperature by hand before entering shower or bath. The temperature may have been changed. Do not touch the unit cover or the flue outlet while in use.

02. Do not insert objects into the flue outlet. On colder days steam may discharge from the flue outlet. This condition is normal for high efficiency appliances.

03. The vent/air intake should be positioned away from flammable materials such as trees, shrubs, etc.

3.1 HOT WATER RISK

01. Hot water is dangerous, especially for the young and the elderly or the infirm. The EZ Tankless water heater allows you to precisely control the temperature of your hot water, ensuring safe water temperature. Water temperature over 125°f can cause severe burns instantly or death from scalding.

02. Hot water can cause first degree burns with exposure for as little as:
3 Seconds at 140°f
20 Seconds at 130°f
8 Minutes at 120°f

03. Test the temperature of the water with your elbow to ensure adequate temperature before placing a child in the bath or shower.

04. Do not leave children or an infirm person in the bath unsupervised.

3.2 SCALDS-FIRST AID GUIDANCE

01. Remove clothing - remove all wet clothing, quickly, as wet clothing retains the heat.

02. Apply cold water for 30 minutes - immediately submerge the burnt area in cold water for 30 minutes to reduce the heat in the skin, preventing deeper burning. Never use butter, oils, or ointment to cover the burn, as they may retain the heat.

03. Keep the individual warm - place a blanket around the affected indivdual.

04. Seek medical advice - call your medical advice hotline and describe the scalding properties, follow their directions to provide further treatment if necessary.

4.0 INITIAL SETUP AND OPERATION

Note: These steps should be followed for every new location or water source

1. DIAL POSITIONING (PRE-FIRST IGNITION)

a. Water Flow Lever - The water flow lever should be first set to the "low" setting.

b. Burner Dial - The burner knob should be first set to the I (single burner) setting.

c. Flame Lever - The flame lever should be first set to the "low" setting.

2. GAS SUPPLY

Gas supply to the EZ 202 LPG unit should only be pressure setting of 11"WC. The EZ 202 Natural Gas requires 8" WC. Lower or higher pressures beyond this value will deliver inconsistent ignition and operation and are not recommended.

3. WATER SOURCE

Inlet water source should be at least 1 gpm filtered water at a minimum pressure of 8PSI. Water flow or water pressure values less than these recommended may result in unit failing to ignite.

4. ADJUSTMENTS FOLLOWING FIRST IGNITION

Note: These adjustments should be made with the unit running and heating water.

a. To increase water flow, slowly push water flow lever to the left. If, while increasing water flow, the EZ 202 flames out, slowly return lever to the right until unit reignites.
Stop! At point of reignition you have reached the maximum flow rate as provided by your chosen water inlet source.

b. To increase water temperature, slowly push the "flame" lever to the left. If you reach the maximum flame level and the water is still not warm enough, return the "flame" lever to the low setting and attempt "step c". When desired water temperature is set, do not reset the dials until a new water source is provided.

c. Start with the burner selection knob on I. If your desired temperature is not reached with burner selection knob on I and flame set to high, turn the flame back to low and set burner selection knob to II. Repeat steps B&C until the desired temperature is reached. Our recommended temperature is between 41-49C (105-120F)

4.1 CONTROL DIALS INFORMATION

1. BURNER SELECTION I, II, III

The burner selection knob will provide the largest fluctuation in delivered water temperature. This dial regulates the internal burners within the system. I - 1 Burner, II - 2 Burners, III - 3 Burners

2. Gas Flow Lever

The gas flow lever controls the height of the flame to each burner. This lever is used to fine tune temperature after selecting the correct burner setting for your water flow.

3. WATER FLOW LEVER

The water flow lever provides the greatest level of control over ignition level. This lever controls water flow through the system. The EZ 202 uses a water pressure activated valve to control the electronic ignition and gas flow through to the burners. If the user sets the water flow dial at the “high” setting (highest amount of water flow) but has a water source with less than 4gpm, there will not be a large enough build of pressure in the water/gas diaphragm to engage the pressure valve. This is why it is always recommended to set the water flow lever to “low” during initial setup/first ignition.

5.0 RECOMMENDED EZ 202 MAINTANENCE

1. CHECK THE GAS HOSE AND REGULATOR FOR ANY DEFECTS

Propane regulators, especially single stage regulators, defect at a high rate predominantly due to age. Most single stage regulators will eventually allow a higher pressure than the required 11”WC by the EZ 202 LPG. When this happens the unit will not ignite. This is the most common fault that causes ignition failure.

2. CHECK THE EXHAUST VENT FOR BLOCKAGE REGULARLY

Debris, animals, or insects may enter the exhaust vent at anytime. Be sure to regularly check the exhaust vent for any blockage. A blockage of the exhaust vent will cause inconsistent water temperatures as well as potential damage to internal components.

3. CLEAN INLET WATER FILTER SCREEN REGULARLY

Located just inside of the water inlet fitting on the bottom of the EZ 202 is a filter screen. This screen is used to keep sediment and small debris from entering the heat exchanger. Be sure to regularly check this screen for any debris that it may have caught. Remove the screen from the inlet using a small pick or screwdriver, blow away or rinse away any debris that may have accumulated and reinstall the filter screen into the water inlet before next use.

4. FLUSH UNIT ONCE A YEAR

With the heating of water through a heat exchanger comes the build up of minerals over time throughout the water heater parts and components. It is recommended to flush your tankless water heater with distilled white vinegar at least once per year when used on a regular basis, to ensure continued use and to avoid parts damage.

5. ALWAYS KEEP COVER OF UNIT CLEAN

The cover of your water heater will become hot during use. It is not recommended to place any stickers, magnets, or other decorative material on the cover of the EZ 202. Be sure to wipe away any dirt or debris that may be on the cover before each use.

6.0 TROUBLESHOOTING

1. WATER HEATER FAILS TO IGNITE/HEAT WATER

Q. DOES THE IGNITER SPARK?

A. NO:

1. Check that the batteries are installed correctly and hold a positive charge.
2. Detach your gas supply (turning off gas supply will not release built up pressure so you must detach gas supply to perform troubleshooting.)
3. Attempt running water through the unit with the gas supply detached. If your unit sparks the igniter without the gas supply attached you may have a gas regulator with an outlet pressure too high. Required gas pressure - 11"WC LPG - 8"WC NG
4. If the unit fails to spark the igniter with the gas supply detached, there may be an issue with the microswitch used to control the electronics.
5. Remove the dial from the front of the unit and center the water flow and gas flow levers.
6. Remove the cover from the unit - screws are located at bottom rear corners
7. With cover removed, locate red and blue wires running from computer board (bottom left corner) to the micro switch (front and center). The wires are connected with using white connectors.
8. Detach the white connectors from each other, thus separating the computer board and micro switch.
9. Using a “flat-blade” screwdriver, complete the circuit between the two prongs located inside the white connector on the computer board side of the red and blue wires.
10. If a spark is produced when doing so, the unit micro switch has failed. If no spark is produced, the unit computer board or battery compartment is faulty.

To test for a faulty battery compartment –

With unit cover removed, remove the red and black wires from the top of the battery compartment. Tape two “D” cell batteries in a series (configuration as follows: +[battery#1]- +[battery#2]-). With the batteries taped together securely, hold the red wire to the positive side of the batteries and the black wire to the negative side of the batteries. Again touch the “flat-blade” screwdriver to the two prong located inside the white connector on the computer board side of the red and blue wires. If a spark is produced, a new battery compartment is required. If no spark is produced a new computer board is required.

Q. DOES THE IGNITER SPARK?

B. YES:

1. If the igniter sparks but the unit fails to flame up, first check that you are using alkaline batteries. If the batteries are weak they will not open/hold open the gas solenoid – this results in gas being restricted from entering the burners.
2. If the heater contains brand new alkaline batteries and sparks, yet does not ignite, a faulty gas solenoid valve may be present.
   To test the gas solenoid contact EZ Tankless Support.
3. If the igniter sparks, the unit flames up but extinguishes itself in 5-10 seconds, a faulty limit switch may be present. In order to resolve, bypass the limit switch by completing the circuit between its two wire connections. With that circuit completed before again attempting to run the water heater.
4. If the unit fires and remains lit with the limit switch bypassed, order a new limit switch from our parts page on our website: [http://www.eztankless.com]

   For complete and up to date troubleshooting and self help videos please visit:

   http://www.eztankless.com/support/ez-101-troubleshooting/

CONTACT US

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